AD-A126 124 19313A MLRS MISSILE NUMBERS BC-607 BC-609 BC-606 BC-610 1/1
BC-608 BC-612 ROU..(U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER JAN 83
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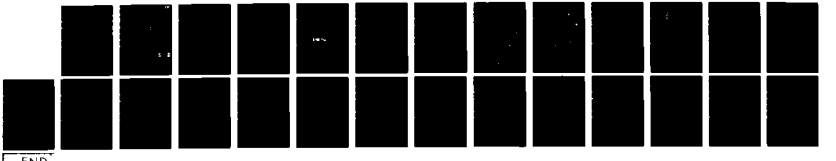

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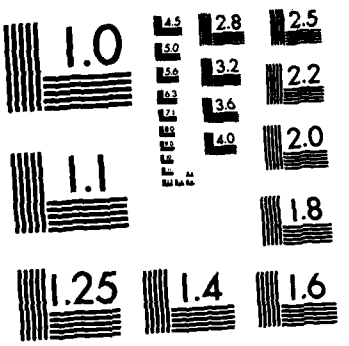

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METEOROLOGICAL DATA REPORT
19313A MLRS
Missile Numbers BC-607, BC-609, BC-606, BC-610, BC-608, BC-612
Round Numbers V-396/JOT-19, 397/JOT-20, V-398/JOT-21, 399/JOT-22 V-400/JOT-23, 401/JOT-24
25 January 1983

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 19313A MLRS, Missile Numbers BC-607, BC-609, BC-606, BC-610, BC-608, BC-612, Round Numbers V-396/JOT-19, V-397/JOT-20, V-398/JOT-21, V-399/JOT-22, V-400/JOT-23, V-401/JOT-24 are presented in tabular form.

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CONTENTS PAGE

INTRODUCTION

19313A MLRS, Missile Numbers BC-607, BC-609, BC-606, BC-610, BC-608 and BC-612, Round Numbers V-396/JOT-19 thru V-401/JOT-24, were launched from Tula Gate, White Sands Missile Range (WSMR), New Mexico, at 1500:01, 1500:06, 1500:10, 1500:14, 1500:19 and 1500L24 MST, 25 Jan 83. The scheduled launch times were 1500 MST, with a 4.5 second separation.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (^{0}C), relative humidity, dew point (^{0}C), density (gm/m^{3}), wind direction and speed, and cloud cover were made at the Tula Gate Met Site at T-0 minutes.

(2) Anemometer data were provided from existing tower-mounted anemometer at Tula Gate. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

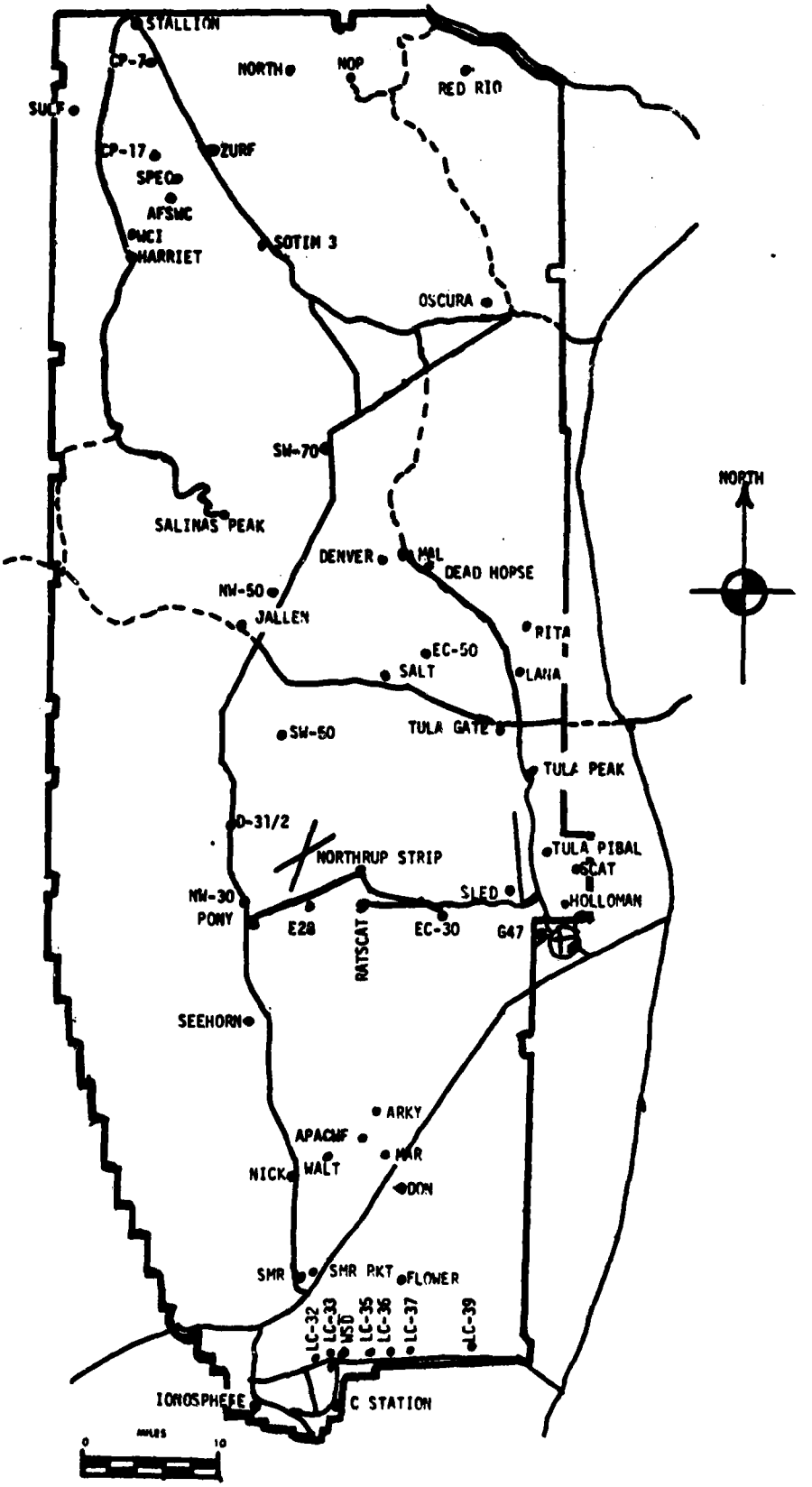
(1) Low level wind data were obtained from pilot-balloon observations at:

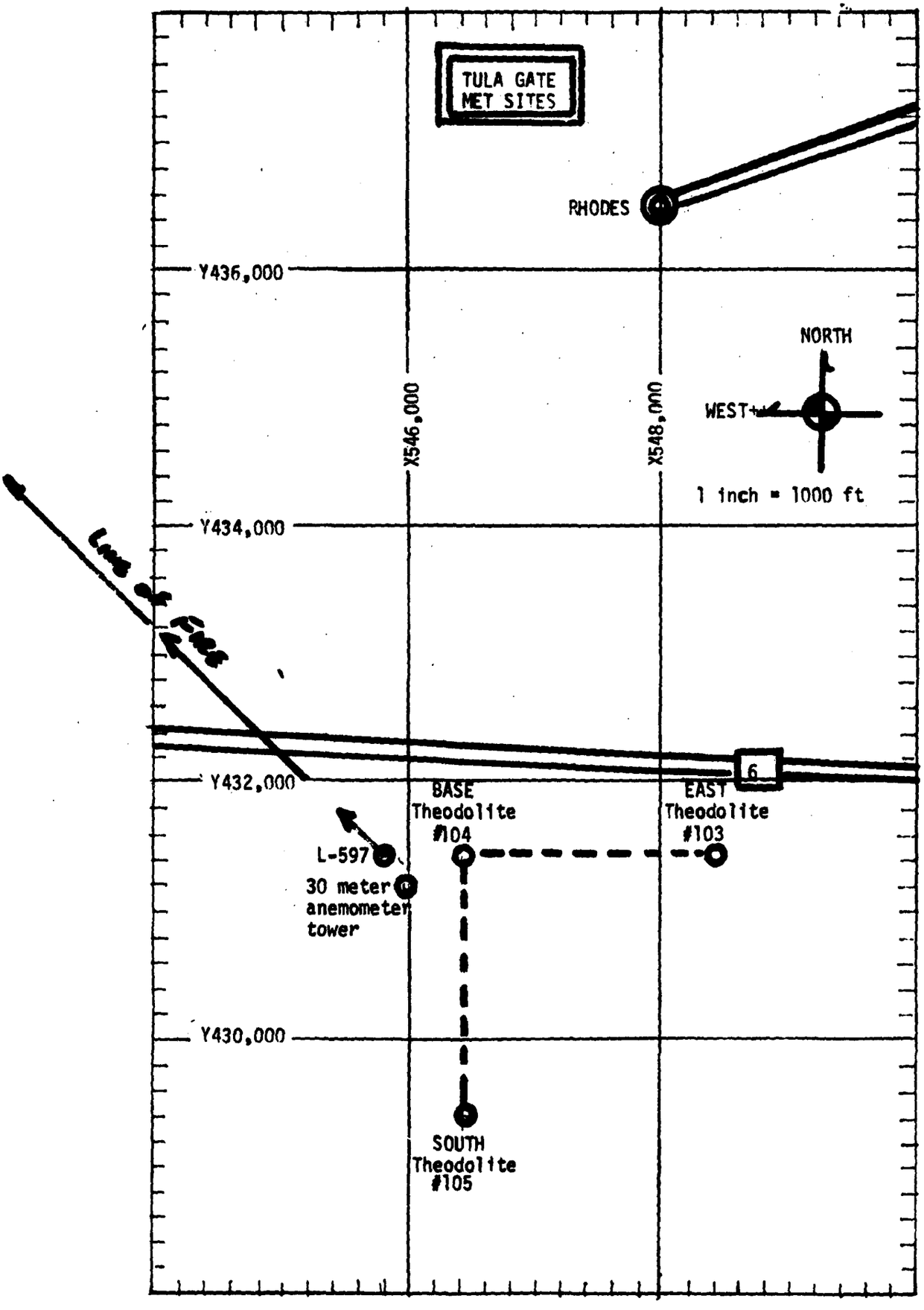
SITE AND ALTITUDE	
Tula Gate	1750 Meters
Deadhorse	1150 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME	
LANA	1300 MST
RITA	1400 MST
LANA	1530 MST

WSMR METEOROLOGICAL SITES




TULA GATE
MET SITES
RHODES
Y436,000
X546,000
X548,000
NORTH
WEST
1 inch = 1000 ft
Y434,000
Y432,000
6
BASE
Theodolite
#104
EAST
Theodolite
#103
L-597
30 meter
anemometer
tower
Y430,000
SOUTH
Theodolite
#105

PROJECT SURFACE OBSERVATION

TABLE 1

STATION TULA GATE

DATE 25 (DAY) Jan (MONTH) 83 (YEAR)

X= 545,785.7 Y= 431,459.0 H= 4103.3

TIME MST	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
1500	870.0		12.3		-0.7	41	1060	300	06		50

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
	6	SC	6,000	1	AC	12,000				

PSYCHROMETRIC COMPUTATION

TIME: MST	1500		
DRY BULB TEMP.	12.3		
WET BULB TEMP.	6.0		
WET BULB DEPR.	6.3		
DEW POINT	-0.7		
RELATIVE HUMID.	41		

TABLE 2

Anemometer Data - 30 FT. Level of 30 Meter Tower
X = 545,944.89 Y = 431,158.70 h = 4102.47 (Base)

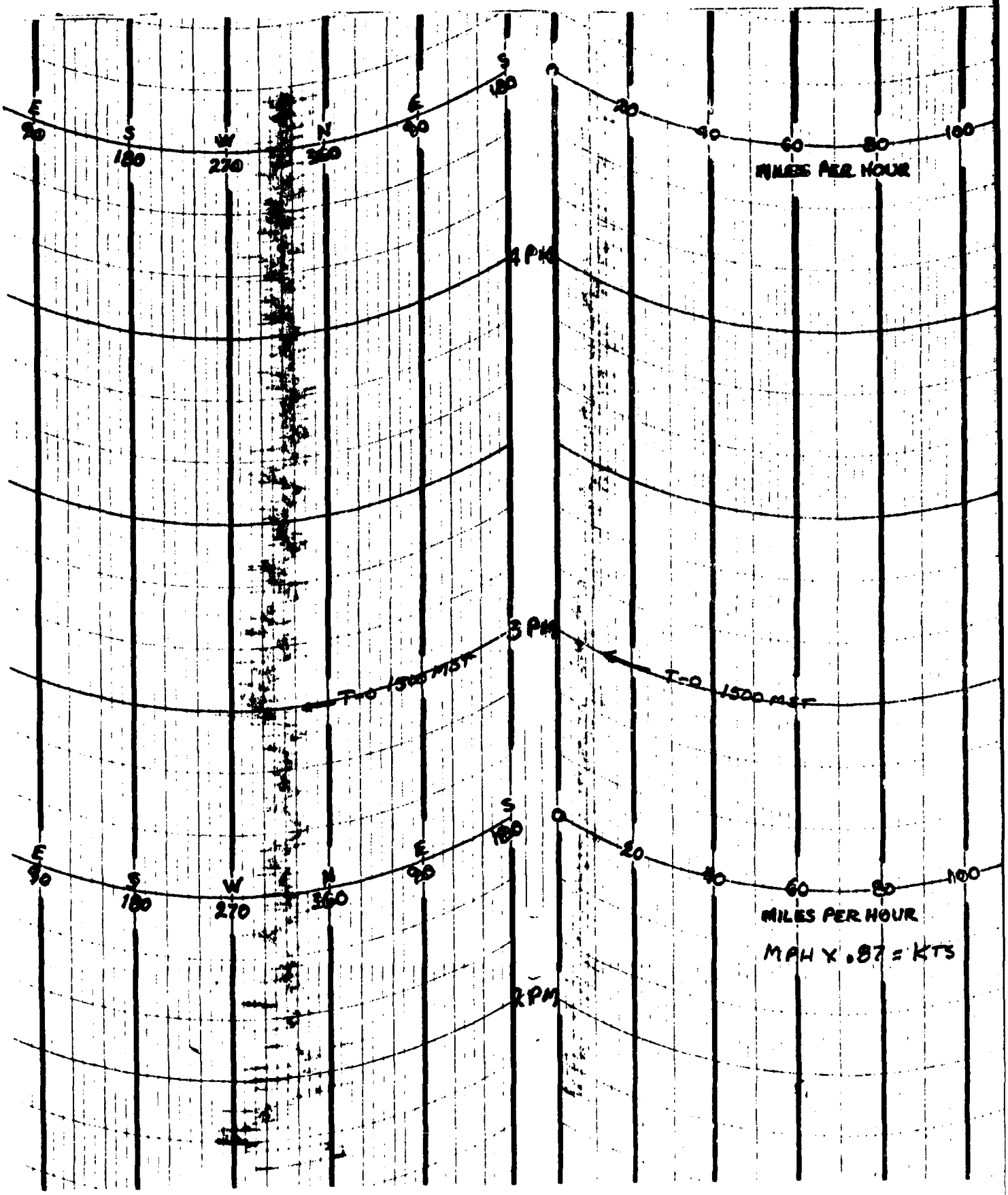


TABLE 3

Anemometer Data - 60 FT. Level of 30 Meter Tower
X = 545,944.39 Y = 431,153.75 H = 4102.47 (Base)

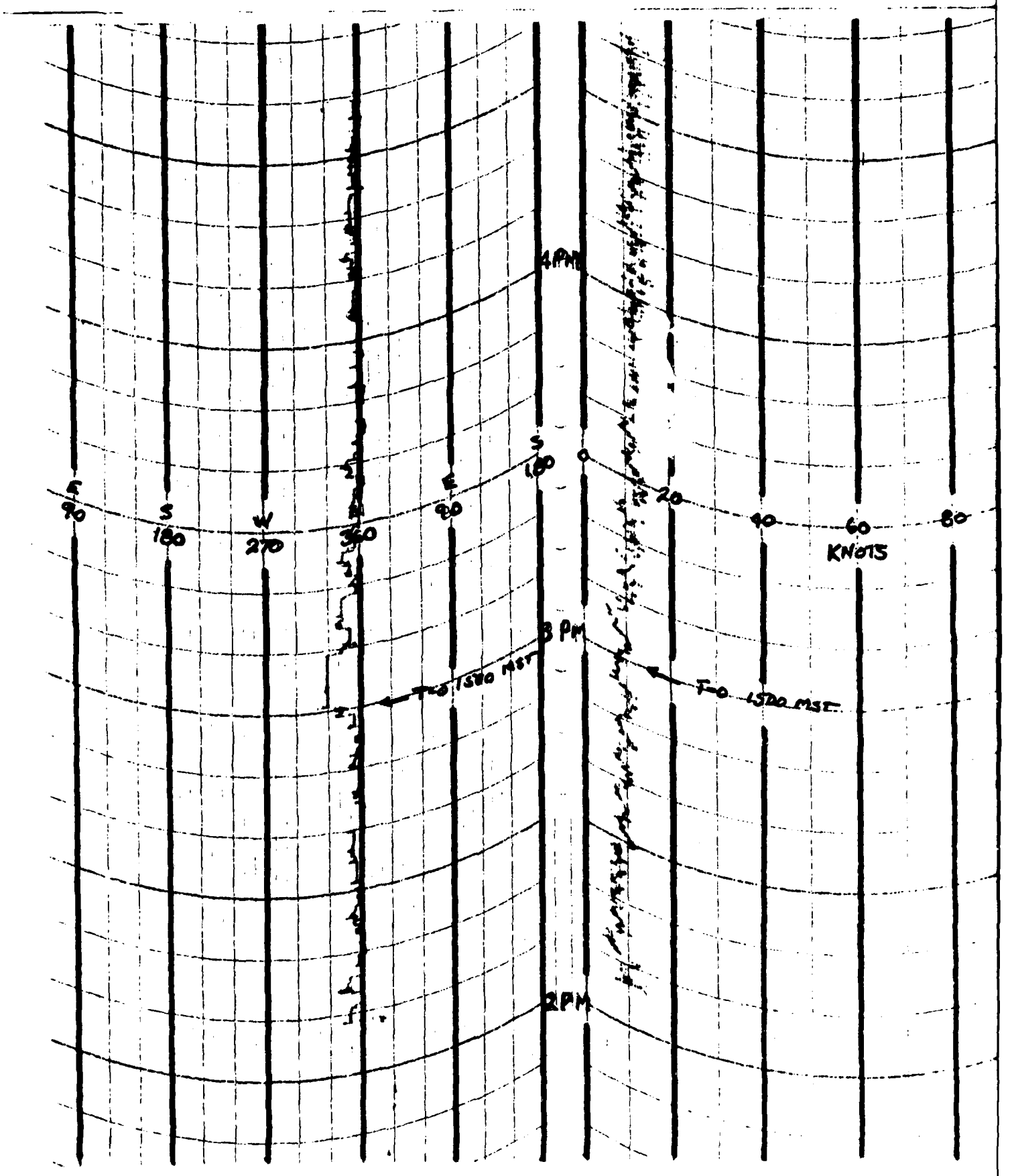


TABLE 4

Anemometer Data - 99 FT. Level of 30 Meter Tower
X = 545,944.09 Y = 431,158.70 H = 4102.47 (Base)

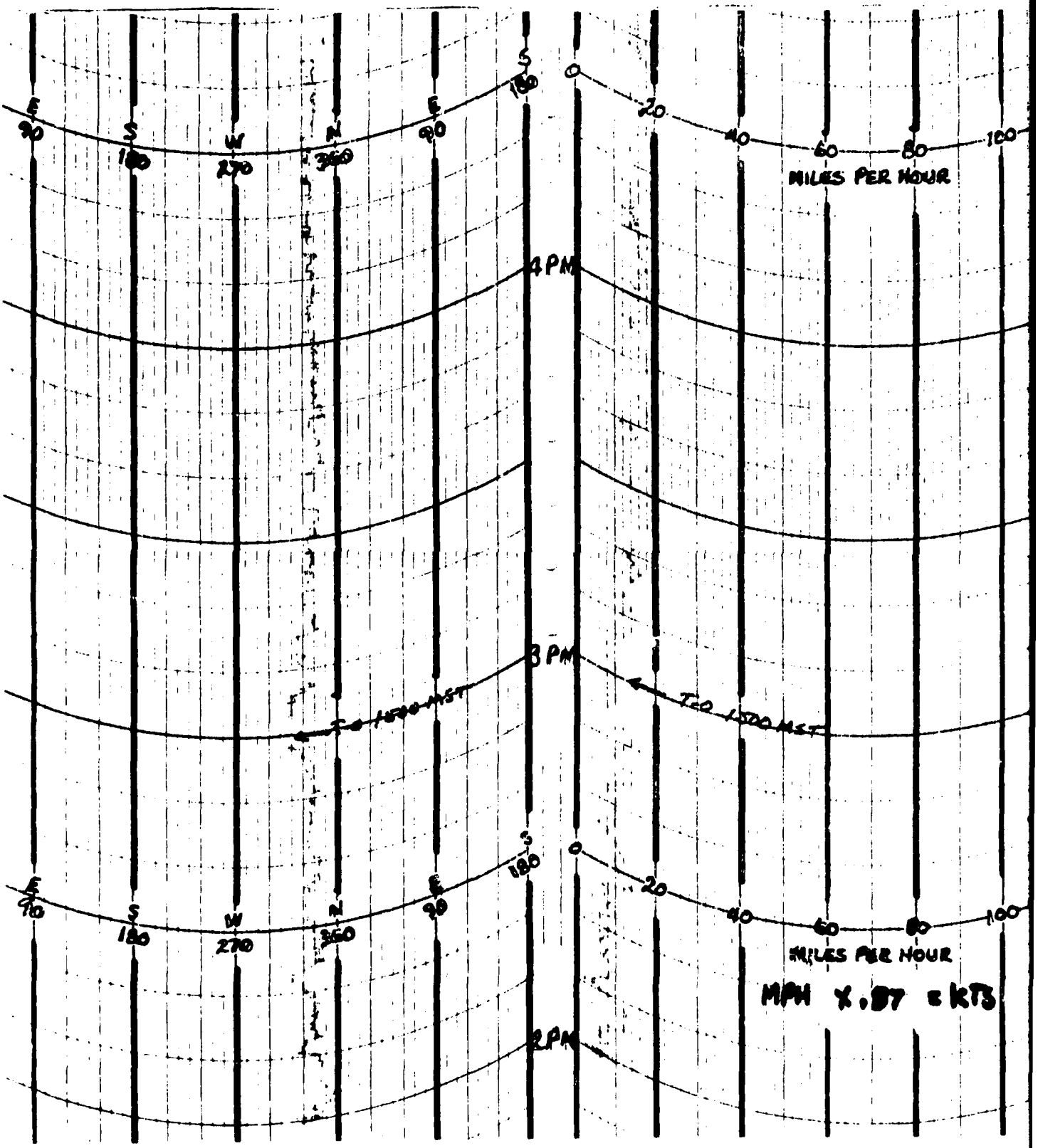


TABLE 5

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 25 Jan 83

SITE: TULA GATE
TIME: 1500 MST
WSTM COORDINATES:
X= 546,402.29
Y= 431,426.23
H= 4,105.26

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	300	06
150	317	10
210	319	11
270	319	11
330	321	12
390	323	12
500	328	13
650	334	13
800	340	14
950	341	14
1150	336	12
1350	328	13
1550	326	14
1750	322	17
2000	MISG	

SITE: DEADHORSE
TIME 1500 MST
WSTM COORDINATES:
X= 519,982.11
Y= 490,249.23
H= 4,133.12

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	310	09
150	310	09
210	310	09
270	310	09
330	310	09
390	318	09
500	337	08
650	334	11
800	334	13
950	330	11
1150	320	13
1350	Lost in clouds	
1550		
1750		
2000		

All data obtained from Double Theodolite Tracked pilot-balloon observations.

TABLE 6

AIMING AND T-TIME MET MESSAGES

25 Jan 83

LANA 1300 MST		RITA 1400 MST	
METCM1331062		METCM1332062	
252000127870		252100128871	
00036004	28560870	00587005	28640871
01603011	28420859	01556012	28490861
02570007	28160834	02573016	28190835
03566009	27800794	03596016	27800796
04573015	27310746	04603017	27270748
05578018	26840701	05591020	26790702
06585021	26460657	06556022	26400659
07579034	26300616	07581029	26360617
08586043	26110577	08578037	26090579
09577033	25750541	09575038	25700542
10565034	25340506	10547037	25320507
11578069	24900473	11549039	24900473
12563041	24300426	12552037	24230427

LANA 1530 MST	
METCM1331062	
252250127870	
00089008	28620870
01636015	28530860
02611019	28300834
03610015	27900795
04604023	27390747
05578018	26910702
06577027	26560658
07600037	26320617
08590041	26090578
09582043	25730542
10573042	25330507
11574047	24980473
12572072	24590427

STATION ALTITUDE 4173.44 FEET MSL
25 JAN. 83 1300 HRS MST
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
0250320002
LANA
TABLE 7

GEODETIC COORDINATES
33.13510 LAT DEG
106.15446 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
869.5	4173.4	11.5	.3	46.0
850.0	4793.3	9.1	-2.8	43.0
814.8	5938.1	6.1	-2.7	53.0
769.6	7462.7	1.8	-6.0	56.0
751.8	8080.8	-.1	-6.7	61.0
730.6	8831.1	-2.0	-6.5	71.0
700.0	9942.9	-5.2	-8.9	75.0
670.2	11059.4	-8.6	-9.7	92.0
656.4	11589.6	-9.0	-12.4	76.0
639.8	12240.4	-9.9	-17.4	54.0
629.0	12672.4	-9.6	-20.1	42.0
607.4	13557.4	-10.9	-21.5	41.0
599.0	13909.1	-11.1	-20.4	46.0
574.6	14956.7	-12.2	-25.1	33.0
500.0	18396.3	-20.6	-32.9	32.0
453.6	20735.6	-27.1	-37.6	36.0
432.0	21887.6	-29.1	-40.5	32.0
400.0	23678.6	-34.2	-45.3	31.0
370.6	25419.7	-38.8	-49.2	32.0

STATION ALTITUDE 4173.44 FEET MSL
25 JAN. 83 1300 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
0250320002
LANA
TABLE 8

GEODETIC COORDINATES
33-13510 LAT DEG
106-15446 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4173.4	869.5	11.5	.3	46.0	1061.2	658.2	20.0	4.1	1.000266
4500.0	859.2	10.2	-1.3	44.4	1053.6	656.6	4.7	4.3	1.000261
5000.0	843.5	8.6	-2.7	44.8	1040.8	654.6	345.8	5.1	1.000256
5500.0	828.1	7.2	-2.7	49.2	1026.5	653.1	333.1	6.3	1.000253
6000.0	812.9	5.9	-2.9	53.1	1012.4	651.6	324.7	7.7	1.000250
6500.0	797.8	4.5	-3.9	54.1	998.8	649.9	319.0	9.2	1.000245
7000.0	783.0	3.1	-5.0	55.1	985.4	648.2	320.2	10.9	1.000240
7500.0	768.5	1.7	-6.1	56.3	972.3	646.5	322.9	12.8	1.000236
8000.0	754.1	.1	-6.6	60.3	959.4	644.6	324.9	14.6	1.000233
8500.0	739.9	-1.2	-6.6	66.6	945.8	643.1	325.0	15.8	1.000230
9000.0	725.9	-2.5	-6.9	71.6	932.5	641.5	325.2	16.9	1.000227
9500.0	712.0	-3.9	-8.0	73.4	919.7	639.8	325.1	17.8	1.000222
10000.0	698.4	-5.4	-8.9	75.9	907.1	638.0	324.5	18.0	1.000218
10500.0	685.0	-6.9	-9.2	83.5	894.7	636.2	324.0	18.2	1.000216
11000.0	671.8	-8.4	-9.6	91.1	882.5	634.4	324.9	19.5	1.000213
11500.0	658.7	-8.9	-11.9	78.7	867.3	633.7	326.1	21.1	1.000206
12000.0	645.9	-9.6	-15.4	62.1	852.7	632.8	326.6	23.8	1.000200
12500.0	633.5	-9.7	-18.9	46.8	836.8	632.6	326.8	27.2	1.000194
13000.0	620.9	-10.1	-20.6	41.6	821.7	632.1	327.5	31.0	1.000189
13500.0	608.8	-10.8	-21.4	41.1	807.9	631.2	328.6	35.2	1.000186
14000.0	596.8	-11.2	-20.8	44.9	793.1	630.8	329.9	39.4	1.000183
14500.0	585.1	-11.7	-22.9	38.7	779.2	630.1	330.8	43.3	1.000179
15000.0	573.6	-12.3	-25.2	33.0	765.7	629.4	329.0	44.4	1.000175
15500.0	562.1	-13.5	-26.4	32.8	753.9	627.9	327.6	42.8	1.000172
16000.0	550.9	-14.7	-27.5	32.7	742.3	626.4	326.2	40.1	1.000169
16500.0	539.8	-16.0	-28.6	32.6	731.0	624.9	325.1	38.6	1.000166
17000.0	529.0	-17.2	-29.8	32.4	719.8	623.4	324.1	38.1	1.000163
17500.0	518.5	-18.4	-30.9	32.3	708.8	621.9	323.2	38.7	1.000161
18000.0	508.1	-19.6	-32.0	32.1	697.9	620.4	322.6	39.2	1.000158
18500.0	497.8	-20.9	-33.1	32.2	687.3	618.8	322.3	39.6	1.000155
19000.0	487.6	-22.3	-34.1	33.0	676.9	617.1	321.8	40.4	1.000153
19500.0	477.5	-23.7	-35.1	33.9	666.7	615.4	321.2	41.7	1.000150
20000.0	467.7	-25.1	-36.1	34.7	656.6	613.7	320.6	42.6	1.000148
20500.0	458.1	-26.4	-37.1	35.6	646.7	612.0	320.0	42.5	1.000146
21000.0	448.5	-27.6	-38.2	35.1	636.1	610.6	319.3	42.4	1.000143
21500.0	439.1	-28.4	-39.5	33.3	625.0	609.5	317.5	41.5	1.000140
22000.0	429.9	-29.4	-40.8	31.9	614.4	608.2	315.7	40.8	1.000138
22500.0	420.8	-30.8	-42.2	31.7	604.9	606.5	314.3	40.5	1.000136
23000.0	411.8	-32.3	-43.5	31.4	595.5	604.7	313.1	41.2	1.000133
23500.0	403.1	-33.7	-44.9	31.1	586.3	602.9	312.5	44.8	1.000131

UPPER AIR DATA

STATION ALTITUDE 4173.44 FEET MSL
25 JAN. 83 1300 HRS MST
ASCENSION NO. 2

0250320002
LANA

TABLE 8 (Cont'd)

GEODETIC COORDINATES
33.13510 LAT DEG
106.15446 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	394.4	-35.0	-46.0	31.2	577.0	601.2			1.000129
24500.0	385.8	-36.4	-47.1	31.5	567.6	599.5			1.000127
25000.0	377.5	-37.7	-48.3	31.8	558.5	597.8			1.000125

STATION ALTITUDE 4173.44 FEET MSL
25 JAN. 83 1300 HRS MST
ASCENSION NO. 2

MANDATORY LEVELS
0250320002
LANA
TABLE 9

GEODETIC COORDINATES
33.13510 LAT DEG
106.15446 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4790.	9.1	-2.8	43.	352.9	4.7
800.0	6426.	4.7	-3.8	54.	319.7	9.0
750.0	8137.	-.3	-6.7	62.	324.9	14.9
700.0	9934.	-5.2	-8.9	75.	324.6	18.0
650.0	11827.	-9.3	-14.2	68.	326.6	22.7
600.0	13852.	-11.1	-20.5	45.	329.4	38.2
550.0	16032.	-14.8	-27.6	33.	326.1	40.0
500.0	18372.	-20.6	-32.9	32.	322.4	39.5
450.0	20894.	-27.4	-38.0	35.	319.6	42.5
400.0	23641.	-34.2	-45.3	31.	312.3	46.0

STATION ALTITUDE 4186.74 FEET MSL
25 JAN. 83 1400 HRS MST
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
0250210002
KITA
TABLE 10

GEODETIC COORDINATES
33.18295 LAT DEG
106.15114 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
871.3	4186.7	12.6	-5.9	27.0
850.0	4864.6	9.6	-6.3	32.0
790.6	6817.5	3.6	-6.4	48.0
729.2	8947.9	-3.1	-7.4	72.0
700.0	10006.1	-6.0	-8.0	86.0
665.1	11315.4	-9.2	-9.5	98.0
632.4	12592.7	-11.5	-11.8	98.0
628.2	12761.7	-8.3	-21.3	34.0
574.2	15035.6	-12.7	-25.9	32.0
534.4	16822.6	-17.1	-30.5	30.0
500.0	18452.2	-20.7	-35.5	25.0
487.3	19076.0	-22.2	-37.2	24.0
427.4	22190.3	-31.2	-43.6	28.0
400.0	23726.1	-34.0	-46.4	27.0
364.4	25856.5	-38.0	-49.9	27.0

STATION ALTITUDE 4186.74 FEET MSL
25 JAN. 83 1400 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
0250210002
RITA

TABLE 11

GEODETIC COORDINATES
33.18295 LAT DEG
106.15114 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4186.7	871.3	12.6	-5.9	27.0	1060.4	659.1	330.0	5.1	1.000255
4500.0	861.4	11.2	-6.0	29.3	1053.5	657.5	328.5	7.1	1.000253
5000.0	845.7	9.2	-6.2	33.1	1041.7	655.2	327.4	10.4	1.000250
5500.0	830.2	7.6	-6.0	37.2	1028.1	653.4	326.8	13.8	1.000248
6000.0	814.9	6.1	-6.0	41.3	1014.8	651.6	329.3	15.0	1.000245
6500.0	800.0	4.6	-6.2	45.4	1001.6	649.8	333.6	15.0	1.000242
7000.0	785.1	3.0	-6.3	50.1	988.6	648.0	336.0	15.6	1.000239
7500.0	770.4	1.5	-6.4	55.7	975.5	646.2	337.8	16.3	1.000236
8000.0	755.9	-.1	-6.6	61.3	962.7	644.3	338.6	16.8	1.000233
8500.0	741.7	-1.7	-7.0	67.0	950.1	642.5	339.8	16.3	1.000230
9000.0	727.7	-3.2	-7.4	72.7	937.6	640.6	340.1	15.9	1.000227
9500.0	713.8	-4.6	-7.6	79.3	924.3	639.0	337.1	17.7	1.000224
10000.0	700.2	-6.0	-7.9	85.9	911.3	637.4	330.0	20.4	1.000221
10500.0	686.6	-7.2	-8.5	90.5	897.8	635.9	323.9	23.1	1.000217
11000.0	673.3	-8.4	-9.1	95.1	884.6	634.4	318.0	21.4	1.000214
11500.0	660.3	-9.5	-9.8	98.0	871.1	633.1	311.3	19.2	1.000210
12000.0	647.4	-10.4	-10.7	98.0	857.1	631.9	317.4	19.4	1.000206
12500.0	634.7	-11.3	-11.6	98.0	843.3	630.8	320.3	39.5	1.000202
13000.0	622.3	-8.8	-21.8	33.8	819.4	633.7	331.8	26.5	1.000188
13500.0	610.1	-9.7	-22.8	33.4	806.4	632.5	327.4	32.0	1.000185
14000.0	598.2	-10.7	-23.8	32.9	793.6	631.3	325.6	37.7	1.000182
14500.0	586.5	-11.7	-24.8	32.5	780.9	630.1	324.6	40.6	1.000178
15000.0	575.0	-12.6	-25.8	32.0	768.5	629.0	324.7	37.3	1.000175
15500.0	563.6	-13.8	-27.1	31.5	756.8	627.5	326.2	36.2	1.000172
16000.0	552.4	-15.1	-28.4	30.9	745.3	626.0	326.4	38.6	1.000169
16500.0	541.4	-16.3	-29.7	30.4	734.0	624.5	324.7	40.5	1.000166
17000.0	530.5	-17.5	-31.0	29.5	722.7	623.0	317.7	38.6	1.000164
17500.0	519.8	-18.6	-32.5	27.9	711.2	621.6	310.7	36.4	1.000161
18000.0	509.3	-19.7	-34.1	26.4	699.9	620.3	307.7	35.8	1.000158
18500.0	499.0	-20.8	-35.6	24.9	688.8	618.9	305.8	34.7	1.000155
19000.0	488.8	-22.0	-37.0	24.1	678.0	617.4	305.2	33.7	1.000153
19500.0	478.7	-23.4	-38.0	24.5	667.6	615.7	307.1	35.5	1.000150
20000.0	468.7	-24.9	-39.0	25.2	657.5	613.9	308.6	36.4	1.000148
20500.0	458.9	-26.3	-40.1	25.8	647.6	612.1	308.8	35.5	1.000145
21000.0	449.4	-27.8	-41.1	26.5	637.9	610.3	309.7	36.2	1.000143
21500.0	440.0	-29.2	-42.1	27.1	628.3	608.5	310.7	38.0	1.000141
22000.0	430.8	-30.7	-43.2	27.8	618.9	606.7	310.8	39.5	1.000139
22500.0	421.7	-31.8	-44.2	27.8	608.6	605.3	310.3	41.3	1.000136
23000.0	412.7	-32.7	-45.1	27.5	597.8	604.2	309.8	43.4	1.000134
23500.0	403.9	-33.6	-46.0	27.1	587.3	603.0	309.5	45.9	1.000131

STATION ALTITUDE 4186.74 FEET MSL
25 JAN. 83 1400 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
0250210002
KITA
TABLE 11 (Cont'd)

GEODETIC COORDINATES
33.18295 LAT DEG
106.15114 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	395.2	-34.5	-46.9	27.0	576.9	601.8	309.2	49.3	1.000129
24500.0	386.7	-35.5	-47.7	27.0	566.7	600.7	308.3	53.6	1.000127
25000.0	378.3	-36.4	-48.5	27.0	556.6	599.5	306.9	56.4	1.000124
25500.0	370.1	-37.3	-49.3	27.0	546.7	598.3			1.000122

STATION ALTITUDE 4186.74 FEET MSL
25 JAN. 83 1400 HRS MST
ASCENSION NO. 2

MANDATORY LEVELS
0250210002
RITA
TABLE 12

GEODETIC COORDINATES
33.18295 LAT DEG
106.15114 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4861.	9.6	-6.3	32.	327.6	9.5
800.0	6497.	4.6	-6.2	45.	333.6	15.0
750.0	8206.	-.8	-6.8	64.	338.9	16.9
700.0	9997.	-6.0	-8.0	86.	330.0	20.5
650.0	11887.	-10.2	-10.5	98.	313.4	16.9
600.0	13913.	-10.5	-23.7	33.	325.8	37.1
550.0	16091.	-15.3	-28.6	31.	326.2	39.2
500.0	18428.	-20.7	-35.5	25.	305.9	34.9
450.0	20950.	-27.7	-41.0	26.	309.6	36.2
400.0	23689.	-34.0	-46.4	27.	309.4	47.0

STATION ALTITUDE 4173.44 FEET MSL
25 JAN. 83 1530 HRS MST
ASCENSION NO. 3

SIGNIFICANT LEVEL DATA
0250320003
LANA

GEODETIC COORDINATES
33.13510 LAT DEG
106.15446 LON DEG

TABLE 13

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
870.0	4173.4	12.3	-.6	41.0
850.0	4811.8	10.7	-1.4	43.0
762.8	7728.2	1.9	-4.8	61.0
724.8	9072.7	-2.4	-6.7	72.0
700.0	9977.4	-4.9	-6.9	86.0
669.6	11120.5	-7.4	-7.8	97.0
660.6	11467.1	-7.7	-8.0	98.0
651.6	11817.3	-9.0	-9.4	97.0
633.8	12521.7	-9.7	-13.1	76.0
616.4	13227.5	-10.4	-17.7	55.0
599.0	13951.9	-10.7	-20.8	43.0
532.0	16914.5	-17.1	-28.9	35.0
500.0	18433.6	-20.8	-32.8	33.0
445.2	21224.1	-26.5	-38.2	32.0
437.8	21623.0	-25.9	-37.6	32.0
423.0	22440.3	-27.1	-38.7	32.0
400.0	23757.1	-30.4	-41.4	33.0
352.4	26686.1	-36.2	-46.8	32.0

STATION ALTITUDE 4173.44 FEET MSL
25 JAN. 83 1530 HRS MST
ASCENSION NO. 3

UPPER AIR DATA
0250320003
LANA
TABLE 14

GEODETIC COORDINATES
33.13510 LAT DEG
106.15496 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4173.4	870.0	12.3	-.6	41.0	1059.0	659.0	50.0	8.0	1.000263
4500.0	859.7	11.5	-1.0	42.0	1049.6	658.1	27.9	8.4	1.000261
5000.0	844.1	10.1	-1.5	44.2	1035.5	656.5	3.3	11.0	1.000257
5500.0	828.6	8.6	-2.0	47.2	1021.9	654.7	349.6	14.8	1.000253
6000.0	813.3	7.1	-2.5	50.3	1008.6	653.0	341.8	19.1	1.000249
6500.0	798.4	5.6	-3.1	53.4	995.4	651.2	341.2	19.6	1.000245
7000.0	783.7	4.1	-3.8	56.5	982.5	649.4	341.8	19.3	1.000242
7500.0	769.3	2.6	-4.5	59.6	969.8	647.6	341.3	18.9	1.000238
8000.0	755.0	1.0	-5.2	63.2	957.2	645.8	339.8	18.4	1.000234
8500.0	740.8	-.6	-5.9	67.3	944.8	643.8	337.9	17.9	1.000231
9000.0	726.8	-2.2	-6.6	71.4	932.5	641.9	336.4	17.7	1.000227
9500.0	713.0	-3.6	-6.7	78.6	919.6	640.3	330.9	17.5	1.000224
10000.0	699.4	-4.9	-6.9	86.2	906.6	638.6	326.3	18.6	1.000221
10500.0	685.9	-6.0	-7.3	91.0	892.9	637.3	322.3	19.8	1.000218
11000.0	672.7	-7.1	-7.7	95.8	879.3	636.0	323.7	21.9	1.000214
11500.0	659.7	-7.8	-8.1	97.9	864.6	635.2	325.0	24.1	1.000210
12000.0	646.9	-9.2	-10.3	91.6	852.4	633.5	330.8	28.5	1.000205
12500.0	634.3	-9.7	-13.0	76.6	837.6	632.8	334.9	33.1	1.000199
13000.0	622.0	-10.2	-16.1	61.8	823.0	632.1	335.0	36.9	1.000193
13500.0	609.8	-10.5	-18.8	50.5	808.1	631.6	335.1	40.7	1.000188
14000.0	597.8	-10.8	-20.9	42.9	793.3	631.2	334.1	41.1	1.000183
14500.0	586.0	-11.9	-22.3	41.5	780.8	629.9	333.1	41.6	1.000180
15000.0	574.4	-13.0	-23.6	40.2	768.6	628.6	331.5	41.4	1.000176
15500.0	563.0	-14.0	-25.0	38.8	756.5	627.3	329.8	41.3	1.000173
16000.0	551.8	-15.1	-26.4	37.5	744.7	625.9	328.1	42.1	1.000170
16500.0	540.9	-16.2	-27.7	36.1	733.0	624.6	327.4	42.7	1.000167
17000.0	530.1	-17.3	-29.1	34.9	721.6	623.3	327.1	43.0	1.000164
17500.0	519.4	-18.5	-30.4	34.2	710.4	621.8	325.0	43.0	1.000161
18000.0	508.9	-19.7	-31.7	33.6	699.4	620.3	323.8	43.1	1.000158
18500.0	498.6	-20.9	-32.9	33.0	688.5	618.8	324.5	43.1	1.000156
19000.0	488.4	-22.0	-33.9	32.8	677.1	617.5	325.9	43.9	1.000153
19500.0	478.3	-23.0	-34.8	32.6	665.9	616.3	327.7	45.2	1.000150
20000.0	468.5	-24.0	-35.8	32.4	654.9	615.0	328.3	49.4	1.000148
20500.0	458.8	-25.0	-36.8	32.3	644.0	613.7	328.6	54.3	1.000145
21000.0	449.4	-26.0	-37.7	32.1	633.4	612.5	325.1	62.0	1.000143
21500.0	440.1	-26.1	-37.8	32.0	620.4	612.4	322.2	69.3	1.000140
22000.0	430.9	-26.5	-38.1	32.0	608.4	612.0	319.1	74.3	1.000137
22500.0	421.9	-27.2	-38.8	32.0	597.6	611.0	317.2	77.4	1.000134
23000.0	413.1	-28.5	-39.8	32.4	588.1	609.4	317.2	75.6	1.000132
23500.0	404.4	-29.8	-40.8	32.8	578.7	607.8	318.1	73.7	1.000130

STATION ALTITUDE 4173.44 FT MSL
25 JAN. 83 1530 HRS MST
ASCENSION NO. 5

UPPER AIR DATA
0250320003
LANA

TABLE 14 (Cont'd)

GEODETIC COORDINATES
33.13510 LAT DEG
106.15446 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	395.8	-30.9	-41.8	32.9	569.1	606.4	319.6	71.9	1.000128
24500.0	387.4	-31.9	-42.8	32.7	559.2	605.2	321.7	72.5	1.000125
25000.0	379.1	-32.9	-43.7	32.6	549.5	603.9	323.8	74.0	1.000123
25500.0	371.0	-33.9	-44.6	32.4	540.0	602.7			1.000121
26000.0	363.0	-34.8	-45.6	32.2	530.6	601.4			1.000119
26500.0	355.2	-35.8	-46.5	32.1	521.4	600.2			1.000117

STATION ALTITUDE 4173.44 FEET MSL
25 JAN. 83 1530 HRS MST
ASCENSION NO. 3

MANDATORY LEVELS
0250320003
LANA
TABLE 15

GEODETIC COORDINATES
33.13510 LAT DEG
106.15446 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4809.	10.7	-1.4	43.	11.1	9.9
800.0	6452.	5.8	-3.0	53.	341.2	19.6
750.0	8169.	.5	-5.4	65.	339.3	18.2
700.0	9968.	-4.9	-6.9	86.	320.0	18.5
650.0	11868.	-9.1	-9.7	95.	329.5	27.4
600.0	13894.	-10.7	-20.6	44.	334.3	41.1
550.0	16071.	-15.3	-26.6	37.	327.8	42.3
500.0	18409.	-20.8	-32.8	33.	324.4	45.1
450.0	20939.	-26.0	-37.7	32.	325.3	61.4
400.0	23720.	-30.4	-41.4	33.	318.8	72.8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